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TITLE : MANUFACTURING OF STEEL PIPE HAVING RESIN-LINED INNER SURFACE

ABSTRACT : PURPOSE: To prepare a steel pipe lined its inner surface with resin, having excellent adhesivity and corrosion resistance, by treating its inner surface with phosphoric acid salt, followed by applying an aqueous solution of organic polymer thereto, drying, and lining with polyethylene powder.

CONSTITUTION: Inner surface of a steel pipe is cleaned by defatting, washing with acid, etc., and treated with a phosphoric acid salt. An aqueous solution of an organic polymer, such as polyacrylic acid, polyvinyl alcohol, hydroxyethyl cellulose, etc., having a pH of 1.0~5.0 and a concentration of 10~200g/l, is applied to the above treated surface, and dried to give a film having a surface density of 20mg/m²~ 2g/m².

The steel pipe thus treated is heated at 200~350°C, and lined with polyethylene powder. The pH of the organic polymer solution is adjusted between 1 and 5 by the use of phosphoric acid, formaldehyde, formic acid, oxalic acid, acetic acid, ammonia, amines, etc.

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